REMARKS

Claims 9 and 11-13 currently appear in this application. The Office Action of October 17, 2007, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Amendments

Claims 1-8, 10 and 14-26 have been cancelled. Claim 9 has been rewritten in independent form by incorporating therein the subject matter of claim 11. Claims 11 and 12 have been amended to depend from claim 9.

Claim 13 has been amended to claim a process for producing "a crystalline associated complex" and "a metal ion compound" has been amended to "calcium chloride" in conformity with amended claim 9. Further, a crystallizing step is added in claim 13.

Rejections under 35 U.S.C. 112

Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that it is unclear what

constitutes "an associated complex" and what the complex is associated with.

This rejection is respectfully traversed. Claims 1-8, 19 and 14-26 have been cancelled. In claims 9 and 13, "an associated complex" has been amended to "an associated complex consisting of α-glycosyl α,α-trehalose and calcium chloride." It is believed that the amendments made to claims 9 and 13 distinctly claim the invention.

Additionally, the specification defines "associated complex" in great detail at page 6, line 19 through page 8, line 10. As a patentee can be his own lexicographer, as long as the term is well defined and is not contrary to conventional usage, it is believed that it is clear what is meant herein by "associated complex."

Art Rejections

Claims 1-8, 13-16, 18-22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al., U.S. 6,159,529 in view of Maruta et al., U.S. 6,017,899. the Examiner states that Uchida teachers a composition comprising α,α-trehalose and calcium chloride, and Maruta teaches non-reducing saccharides α-glucosyl trehalose, and that it would have been obvious to one of ordinary skill in the art to prepare a complex comprising an α-glycosyl α,α-trehalose and a metal ion compound.

This rejection is respectfully traversed. Claims 1-8 and 14-26 have been cancelled, and amended claim 13 defines allowable subject matter as explained below.

First, it should be noted that Uchida discloses a composition comprising α,α-trehalose and calcium chloride, but never teaches a composition comprising a-glycosyl α,α-trehalose and calcium chloride. α-glycosyl α,α-trehalose is a **derivative** of α,α-trehalose and should be distinguished from α,α-trehalose. Furthermore, Uchida neither teaches not suggests that α-glycosyl α,α-trehalose may form an associated complex with calcium chloride to produce a crystalline associated complex of α-glycosyl α,α-trehalose and calcium chloride.

Maruta teaches α-glucosyl α,α-trehalose and a composition containing the same. However, Maruta neither teaches nor suggests that α-glycosyl α,α-trehalose can form an assonated complex with calcium chloride to produce a crystalline associated complex of α-glycosyl α,α-trehalose and calcium chloride.

Accordingly, it is respectfully submitted that claim 13 as amended is not obvious over the combination of Uchida and Maruta.

Claims 9-12, 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida in view of Maruta and

further in view of Cook et al., *Carbohydrate Research* **31** (1973) 265-275.

This rejection is respectfully traversed. Claims 10, 17 and 23 have been cancelled, and it is respectfully submitted tat claims 9, 11 and 12 define allowable subject matter as explained above.

The Examiner admits that neither Uchida nor Maruta teaches a crystalline complex of an α-glycosyl α,α-trehalose and a metal ion compound. While Cook teaches α,α-trehalose and calcium bromide, Cook does not teach calcium bromide complexed with **α-glycosyl α,α-trehalose**. As noted above, α-glycosyl α,α-trehalose is a derivative of α,α-trehalose, and there is nothing in any of the cited references that even suggests that the complex as claimed herein can be produced. Moreover, Cook teaches calcium bromide rather than calcium chloride. Cook adds nothing to Uchida and Maruta. Accordingly, it is respectfully submitted that amended claims 9, 11 and 12 are nor obvious over Uchida in view of Maruta and further in view of Cook.

Claims 1-8, 13-16, 18-22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oku et al., WO 03/016325 in view of Maruta. The Examiner states that Oku teaches associates of trehalose and metal compounds, and Maruta teaches non-reducing saccharides, making it obvious to

one skilled in the art to prepare a composition comprising a crystalline complex of an α-glycosyl α,α-trehalose and a metal ion compound.

This rejection is respectfully traversed. Claims 1-8 and 14-26 have been cancelled, and it is respectfully submitted that claim 13 as amended defines allowable subject matter as explained above.

As noted above, α-glycosyl α,α-trehalose is not the same as α,α-trehalose. As such, it would have been difficult even for one of ordinary skill in the art to expect with reasonable expectation of success that α-glycosyl α,α-trehalose would form an associated complex with calcium chloride, and further to form a crystalline associated complex of α-glycosyl α,α-trehalose and calcium chloride even if α,α-trehalose and metal compounds form an associated complex. It is respectfully submitted that applicant's disclosure is the first to disclose or suggest the formation of a crystalline associated complex of α-glycosyl α,α-trehalose and calcium chloride.

Double Patenting

Claims 1-26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 and 14 of U.S. Patent No. 6,017,899 in view of Uchida. The Examiner states that the

difference between the instant claims and those of US'899 is that the instant claims are drawn to complexes of α-glycosyl α,α-trehalose and a metal ion compound and the claims of US'899 are drawn to α-glycosyl α,α-trehalose compounds. The Examiner further states that Uchida teaches metal ion complexes of α,α-trehalose.

This rejection is respectfully traversed. Claims 1-8, 10 and 14-26 have been cancelled, so the rejection of these claims is moot. It is respectfully submitted that claims 9 and 11-13 define allowable subject matter.

US'899 claims, in claim 1, "A composition which consists essentially of (i) a saccharide composition comprising trehalose and non-reducing saccharide..." However, the crystalline associated complex claimed herein consists of α-glycosyl α,α-trehalose and calcium chloride and does not include trehalose. Therefore, claims 9 and 11-13 are distinguished from claims 1-10 and 14 of US'899.

As noted above, Uchida teaches nothing about the claimed invention, and therefore adds nothing to US'899. Accordingly, it is respectfully submitted that claims 9 and 11-13 are not obvious over US'899 in view of Uchida.

Claims 1-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-36 and 38 of copending application

no. 10/486,328 in view of Maruta and Cook. The Examiner states that the difference between the instant claims and the claims of the copending application is that the instant claims are drawn to metal complexes of α-glycosyl α,α-trehalose and a metal compound, and the claims of the copending application are drawn to metal complexes of α,α-trehalose. As has been explained above, these two types of metal complexes are quite different, and there is no suggestion or teaching in any of the cited references that one can produce crystalline complexes of α-glycosyl α,α-trehalose and calcium chloride.

The specification of the present application cites WO 03/016325 at page 2, lines 13-21, and notes that no saccharide has been discovered that can function the same as trehalose or maltitol to improve the properties of a metal ion compound in foods, such as deliquescence, reducing power, oxidizing power, low solubility in water, etc. At page 3, lines 14-18, it is noted that the complexes claimed herein, namely, crystalline complexes of α-glycosyl α,α-trehalose and calcium chloride, provided superior properties as compared to similar complexes with maltitol and trehalose. Moreover, the deliquescent properties of calcium chloride are remarkable reduced by forming associated complexes of α-glycosyl α,α-trehalose and calcium chloride (specification page 9, lines 20-27).

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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